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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/733,634 | 12/12/2003 | Masayuki Shinozaki | Q78655 | 1643 |

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| EXAMINER | |
|---|---|
| AJIBADE AKONAI, OLUMIDE | |
| **ART UNIT** | **PAPER NUMBER** |
| 2617 | |

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| 09/11/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/733,634 | SHINOZAKI ET AL. | |
| | Examiner | Art Unit | |
| | Olumide T. Ajibade-Akonai | 2617 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/12/03,7/09/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Drawings*

1. Figure 15 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Andersson et al 20030012217** (**hereinafter Andersson**) in view of **Brouwer 6,760,303**.

Regarding **claim 1**, Anderson discloses a channel switching method of a CDMA mobile wireless system (see fig. 4, p.4, [0034]) comprising the steps of: periodically measuring of the average effective Data Rate (throughput or data rate, see p.5, [0044]) of the transmission being carried out (throughput measurement, see fig. 8, p.5, [0044], [0046]); comparing the measured average effective Data Rate with a threshold value (comparing if the current throughput on the dedicated channel is less than a threshold, see fig. 8, p.5, [0045]); and switching between a common channel and a dedicated channel based on the comparison results (switching from dedicated to common channel if the current throughput is less than the throughput threshold for a period of time, see fig. 8, p.5-p.6, [0045]-[0046]).

Andersson does not specifically disclose wherein at least one of the threshold value and the measurement period for the average effective Data Rate is controlled in accordance with at least one of a value related to the mode of the changes of the measured average effective Data Rate and the number of subscribers of the system.

In the same field of endeavor, Brower discloses wherein at least one of the threshold value (threshold amount Dth, see col. 11, lines 31-35) and the measurement period for the average effective Data Rate is controlled in accordance with at least one of a value related to the mode of the changes of the measured average effective Data Rate and the number of subscribers of the system (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 2**, as applied to claim 1, Andersson, as modified by Brouwer disclose the claimed invention. Brouwer further discloses a step of controlling the threshold value based on the frequency of switching between the channels (see col. 8, lines 6-19). It would therefore have been obvious to one of ordinary skill in the art at the

time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 3**, as applied to claim 1, Andersson, as modified by Brouwer disclose the claimed invention. Brouwer further discloses controlling the measurement period based on the frequency of switching between the channels (see col. 8, lines 6-19). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 4**, as applied to claim 1, Andersson, as modified by Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value for determining switching of the common channel (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14), and a threshold value for determining switching of the dedicated channel which form the threshold value, based on the frequency of switching between the respective channels (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14). It would therefore have been

obvious to one of ordinary skill in the art at the time the invention was made, to modify the combination of Andersson and Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 5**, as applied to claim 1, Andersson further discloses a step of controlling the threshold value based on increase and decrease of the average effective Data Rate (see p.5, [0145]-[0146]).

Regarding **claim 6**, as applied to claim 1, Andersson, as modified by Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value based on increase or decrease of the average data rate (see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the combination of Andersson and Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 7**, as applied to claim 1, Andersson, as modified by Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value based on the number of subscribers (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

5. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Takeuchi et al 20020177468 (hereinafter Takeuchi)** in view of **Andersson et al 20030012217 (hereinafter Andersson)** and **Brouwer 6,760,303**.

Regarding **claim 8**, Takeuchi discloses a base station of the CDMA mobile wireless system (see fig. 1, p.2, [0030], p.3, [0044]) comprising a channel switching control portion (switching unit 130, see fig. 1, p.2, [0030]-[0031]) which carries out switching between the common channel and the dedicated channel (see abstract, p.1, [0008]).

Takeuchi fails to disclose an effective Data Rate measuring portion which periodically measures the average effective Data Rate of the transmission being carried out; a comparison portion which compares the measured effective Data Rate with a threshold value; and a channel switching control portion which carries out switching between the common channel and the dedicated channel based on the comparison results.

In an analogous art, Andersson discloses a technique for switching between a dedicated and common channel by using an effective Data Rate measuring

portion (MC 214, see fig. 10, p.6, [0050]) which periodically measures the average effective Data Rate (throughput or data rate, see p.5, [0044]) of the transmission being carried out (throughput measurement, see fig. 8, p.5, [0044], [0046]); a comparison portion (MC 214, see fig. 10, p.6, [0051]) which compares the measured effective Data Rate with a threshold value (comparing if the current throughput on the dedicated channel is less than a threshold, see fig. 8, p.5, [0045]); and a channel switching control portion (CTS 206, see fig. 10, p.6, [0050]) which carries out switching between the common channel and the dedicated channel based on the comparison results (switching from dedicated to common channel if the current throughput is less than the throughput threshold for a period of time, see fig. 8, p.5-p.6, [0045]-[0046]).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Andersson, by having a functionality of measuring a throughput/data rate and switching between a dedicated and common channel based on a comparison between the measured throughput/data rate and a threshold incorporated in a processor, into the system of Takeuchi, for the benefit of providing a controlled channel switching.

Takeuchi, as modified by Andersson, fails to disclose wherein at least one of the threshold value and the measurement period for the average effective Data Rate is controlled in accordance with at least one of a value related to the mode of the changes of the measured average effective Data Rate and the number of subscribers of the system.

In the same field of endeavor, Brower discloses wherein at least one of the threshold value (threshold amount Dth, see col. 11, lines 31-35) and the measurement period for the average effective Data Rate is controlled in accordance with at least one of a value related to the mode of the changes of the measured average effective Data Rate and the number of subscribers of the system (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Takeuchi, as modified by Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 9**, as applied to claim 8, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Brouwer further discloses a step of controlling the threshold value based on the frequency of switching between the channels (see col. 8, lines 6-19). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to further modify the combination of Takeuchi, Andersson, and Brouwer by combining the method of Brouwer, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 10**, as applied to claim 8, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Brouwer further discloses controlling the measurement period based on the frequency of switching between the channels (see col. 8, lines 6-19). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Takeuchi, as modified by Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 11**, as applied to claim 8, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value for determining switching of the common channel (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14), and a threshold value for determining switching of the dedicated channel which form the threshold value, based on the frequency of switching between the respective channels (buffer threshold amount Dth is dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the combination of Takeuchi, Andersson and Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to

switch from a dedicated to a common channel, by monitoring the cell load, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 12**, as applied to claim 1, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Andersson further discloses a step of controlling the threshold value based on increase and decrease of the average effective Data Rate (see p.5, [0145]-[0146]). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the combination of Takeuchi, Anderson, and Brouwer for the benefit of providing a controlled channel switching.

Regarding **claim 13**, as applied to claim 8, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value based on increase or decrease of the average data rate (see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14). It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to modify the combination of Takeuchi, as modified by Andersson and Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, for the benefit of preventing unnecessary switching between dedicated and common channels.

Regarding **claim 14**, as applied to claim 8, Takeuchi, as modified by Andersson and Brouwer disclose the claimed invention. Brouwer further discloses controlling the threshold value based on the number of subscribers (buffer threshold amount Dth is

dynamically adjusted based on cell load, see abstract, fig. 10b, col. 9, lines 51-67, col. 10, lines 1-5, col. 11, lines 51-67, col. 12, lines 1-14).

It would therefore have been obvious to one of ordinary skill in the art at the time the invention was made, to combine the method of Brouwer, by dynamically adjusting the buffer threshold length that is used to determine whether to switch from a dedicated to a common channel, by monitoring the cell load, into the system of Takeuchi, as modified by Andersson, for the benefit of preventing unnecessary switching between dedicated and common channels.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Torsner et al 20040037327 discloses radio link monitoring in a wireless telecommunications network.

Rune et al 6,829,482 discloses switching from dedicated to common channels when radio resources are controlled by drift radio network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on 571-272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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